

Notice of Allowability

Application No.

10/068,251

Examiner

Joseph D. Torres

Applicant(s)

CHANG ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Response to Election/Restriction filed 07/23/2004.
2. ☒ The allowed claim(s) is/are 6 and 7.
3. ☒ The drawings filed on 06 February 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20041125.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jiawei Huang on 11/24/2004.

The application has been amended as follows:

As per claim 6:

In line 1 of claim 6, 'the' was removed.

In line 10 of claim 6, 'cod' was replaced with --code--.

In line 12 of claim 6, 'a read/write' was replaced with --read or write--.

In line 13 of claim 6, 'operation' was replaced with --operations--.

As per claim 7:

In line 1 of claim 7, 'the memory control method' was replaced with --The memory control method--.

In lines 1 and 2 of claim 7, 'determining the actions on the memory' was replaced with --controlling transfer of memory data--.

Reason's for Allowance

2. The following is an examiner's statement of reasons for allowance:

The present invention pertains to an adaptive error correcting method for accessing data stored in two different locations of memory whereby data in a first location is comprised of sufficient error detection and correction data to enable error detection and correction of the data and data in a second location has no means for error detection or correction for data stored in the second memory location.

Claim 6 recites various features:

"receiving and decoding a memory access command, wherein the memory access command includes an access address and a command code; if the access address points to a memory bank range having an error-check-correction function but outside a graphic memory range: reading data from memory and modifying the data before writing back into the memory if the command code is a partial write command; and executing an error checking and correction program while reading from the memory if the command code is a read command; writing the data to memory if the command code is a normal write command; and if the access address is within the graphic memory range, conducting read or write operations without any error checking or correction".

The Prior Art of record, and in particular, Herzberg; Hanan (US 5970098 A) and Sinha; Deepen et al. (US 6223324 B1, hereafter referred to as Sinha) teach an adaptive error correcting method for accessing data stored in two different locations of memory (Figure 1 of Sinha teaches various channels for transmitting data accompanied by various degree of error correction; Note: col. 3, lines 62-65 in Sinha teach that a storage

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channel, e.g., a memory or other storage device, is a channel) whereby data in a first location is comprised of sufficient error detection and correction data to enable error detection and correction of the data (Figure 1 of Sinha teaches various channels for transmitting data accompanied by various degree of error correction; Note: col. 3, lines 62-65 in Sinha teach that a storage channel, e.g., a memory or other storage device, is a channel) and data in a second location has no means for error detection or correction for data stored in the second memory location (Figure 1 in Herzberg teaches the use of uncoded bits for channel communications).

The prior art however are not concerned with and do not teach, suggest, or otherwise render obvious the details of memory access used to implement the adaptive decoding process as taught by claim 6 such as "receiving and decoding a memory access command, wherein the memory access command includes an access address and a command code; if the access address points to a memory bank range having an error-check-correction function but outside a graphic memory range: reading data from memory and modifying the data before writing back into the memory if the command code is a partial write command; and executing an error checking and correction program while reading from the memory if the command code is a read command; writing the data to memory if the command code is a normal write command; and if the access address is within the graphic memory range, conducting read or write operations without any error checking or correction". Hence the prior art taken alone or in any combination fail to teach the claimed novel feature in claim 6.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joseph D. Torres, PhD
Primary Examiner
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